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# **deluge Documentation**

*Release 2.0.0b2.dev313*

**Deluge Team**

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# Contents

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<b>1</b>	<b>Contents</b>	<b>1</b>
1.1	Development & community . . . . .	1
1.2	Deluge Development Guide . . . . .	6
1.3	Reference . . . . .	15



## 1.1 Development & community

Deluge is an open-source project, and relies on its community of users to keep getting better.

### 1.1.1 Contributing code

#### Basic requirements and standards

- A *new ticket* is required for bugs or features. Search the ticket system first, to avoid filing a duplicate.
- Ensure code follows the *syntax and conventions*.
- Code must pass tests. See [testing.md] for information on how to run and write unit tests.
- Commit messages are informative.

#### Pull request process:

- Fork us on [github](#).
- Clone your repository.
- Create a feature branch for your issue.
- Apply your changes:
  - Add them, and then commit them to your branch.
  - Run the tests until they pass.
  - When you feel you are finished, rebase your commits to ensure a simple and informative commit log.
- Create a pull request on github from your forked repository.
  - Verify that the tests run by [Travis-ci](#) are passing.

## Syntax and conventions

### Code formatters

We use two applications to automatically format the code to save development time. They are both run with pre-commit.

#### Black

- Python

#### Prettier

- Javascript
- CSS
- YAML
- Markdown

#### Common

- Line length: 79 chars.
- Indent: 4 spaces, no tabs.
- All code should use 'single quotes'.

#### Python

We follow [PEP8](#) and [Python Code Style](#) which is adhered to with Black formatter.

- Code `“must”` pass `flake8` ([w/\[https://pypi.python.org/pypi/flake8-quotes](https://pypi.python.org/pypi/flake8-quotes) `flake8-quotes`]), [\[https://pypi.python.org/pypi/isort](https://pypi.python.org/pypi/isort) `isort`] and [\[http://www.pyLint.org/](http://www.pyLint.org/) `Pylint`] source code checkers.  
`flake8 deluge isort -rc -df deluge pylint deluge pylint deluge/plugins/*/deluge/`
- Using the [\[http://pre-commit.com/](http://pre-commit.com/) `pre-commit`] app can aid in picking up issues before creating git commits.

#### Strings and bytes

To prevent bugs or errors in the code byte strings (`str`) must be decoded to strings (unicode strings, `unicode`) on input and then encoded on output.

*Notes:*

- PyGTK/GTK+ will accept `str` (utf8 encoded) or `unicode` but will only return `str`. See [\[http://python-gtk-3-tutorial.readthedocs.org/en/latest/unicode.html](http://python-gtk-3-tutorial.readthedocs.org/en/latest/unicode.html) `GTK+ Unicode`] docs.
- There is a `bytearray` type which enables in-place modification of a string. See [Python Bytearrays](#)
- Python 3 renames `unicode` to `str` type and byte strings become `bytes` type.

## Javascript

- Classes should follow the Ext coding style.
- Class names should be in !CamelCase
- Instances of classes should use camelCase.

## Path separators

- All relative path separators used within code should be converted to posix format /, so should not contain \ or \\ . This is to prevent confusion when dealing with cross-platform clients and servers.

## Docstrings

All new docstrings must use Napoleon [Google Style](#) with old docstrings eventually converted over.

Google Style example:

```
def func(arg):
    """Function purpose.

    Args:
        arg (type): Description.

    Returns:
        type: Description. If the line is too, long indent next
        line with three spaces.
    """
    return
```

See complete list of [<http://www.sphinx-doc.org/en/master/usage/extensions/napoleon.html#docstring-sections> supported headers].

Verify that the documentation parses correctly with:

```
python setup.py build_docs
```

### 1.1.2 Running tests

Deluge testing is implemented using Trial which is Twisted's testing framework and an extension of Python's unittest.

See Twisted website for documentation on [Twisted Trial](#) and [Writing tests using Trial](#).

## Testing

The tests are located in the source folder under `deluge/tests`. The tests are run from the project root directory. View the unit test coverage at: [deluge-torrent.github.io](http://deluge-torrent.github.io)

## Trial

Here are some examples that show running all the test through to selecting an individual test.

```
trial deluge
trial deluge.tests.test_client
trial deluge.tests.test_client.ClientTestCase
trial deluge.tests.test_client.ClientTestCase.test_connect_localclient
```

## Pytest

```
pytest deluge/tests
pytest deluge/tests/test_client.py
pytest deluge/tests/test_client.py -k test_connect_localclient
```

## Plugin

Running the tests for a specific plugin (requires `pytest`):

```
pytest deluge/plugins/<name-of-plugin>
```

## Tox

All the tests for Deluge can be run using `tox`

**See available targets:**

```
tox -l
py27
py3
lint
docs
```

**Run specific test:**

```
tox -e py3
```

**Verify code with pre-commit:**

```
tox -e lint
```

## Travis-ci

Deluge develop branch is tested automatically by [Travis](#). When creating a pull request (PR) on [github](#), Travis will be automatically run the unit tests with the code in the PR.

### 1.1.3 Documentation contributions

#### Build

We use Sphinx to create the documentation from source files and docstrings in code.

```
pip install -r requirements-docs.txt
python setup.py build_docs
```

The resulting html files are in docs/build/html.

#### man pages

Located in docs/man

### 1.1.4 Translation contributions

#### Translators

For translators we have a [Launchpad translations](#) account where you can translate the .po files.

#### Marking text for translation

To mark text for translation in Python and ExtJS wrap the string with the function `_()` like this:

```
torrent.set_tracker_status(_("Announce OK"))
```

For GTK the text can also be marked translatable in the glade/\*.ui files:

```
<property name="label" translatable="yes">Max Upload Speed:</property>
```

For more details see: [<http://docs.python.org/library/gettext.html> Python Gettext]

#### Translation process

These are the overall stages in gettext translation:

Portable Object Template -> Portable Object -> Machine Object

- The deluge.pot is created using generate\_pot.py.
- Upload deluge/i18n/deluge.pot to [Launchpad translations](#).
- Give the translators time to translate the text.
- Download the updated .po files from translation site.
- Extract to deluge/i18n/ and strip the deluge- prefix:

```
rename -f 's/^deluge-//' deluge-*.po
```

- The binary MO files for each language are generated by setup.py using the msgfmt.py script.

To enable WebUI to use translations update gettext.js by running gen\_gettext.py script.

## Useful applications

- `podiff` - Compare textual information in two PO files
- `gtranslator` - GUI po file editor
- `Poedit` - GUI po file editor

## Testing translation

Testing that translations are working correctly can be performed by running Deluge as follows.

Create an MO for a single language in the correct sub-directory:

```
mkdir -p deluge/i18n/fr/LC_MESSAGES
python msgfmt.py -o deluge/i18n/fr/LC_MESSAGES/deluge.mo deluge/i18n/fr.po
```

Run Deluge using an alternative language:

```
LANGUAGE=fr deluge
LANGUAGE=ru_RU.UTF-8 deluge
```

Note: If you do not have a particular language installed on your system it will only translate based on the MO files for Deluge so some GTK text/button strings will remain in English.

## 1.2 Deluge Development Guide

This is a guide to help with developing Deluge.

### 1.2.1 Developer tutorials

A list of articles to help developers get started with Deluge.

#### Setup tutorial for Deluge development

The aim of this tutorial is to download the source code and setup an environment to enable development work on Deluge.

#### Pre-requisites

To build and run the Deluge applications they depends on tools and libraries as listed in `DEPENDS.md`.

Almost all of the Python packages dependencies will be installed using `pip` but there are some packages or libraries that are required to be installed to the system.

## Ubuntu

### Build tools

```
sudo apt install git intltool closure-compiler
pip install --user tox tox-venv
```

### Runtime libraries and tools

```
sudo apt install python-libtorrent python-geoip python-dbus python-glade2 \
librsvg2-common xdg-utils python-appindicator python-notify python-pygame
```

## Setup development environment

### Clone Deluge git repository

Download the latest git code to local folder.

```
git clone git://deluge-torrent.org/deluge.git
cd deluge
```

### Create Python virtual environment

Creation of a [Python virtual environment] keeps the development isolated and easier to maintain and tox has an option to make this process easier:

```
tox -e denv3
```

Activate virtual environment:

```
source .venv/bin/activate
```

Deluge will be installed by tox in *develop* mode which creates links back to source code so that changes will be reflected immediately without repeated installation. Check it is installed with:

```
(.venv) $ deluge --version
deluge-gtk 2.0.0b2.dev149
libtorrent: 1.1.9.0
Python: 2.7.12
OS: Linux Ubuntu 16.04 xenial
```

### Setup pre-commit hook

Using [pre-commit](#) ensures submitted code is checked for quality when creating git commits.

```
(.venv) $ pre-commit install
```

You are now ready to start playing with the source code.

## Reference

- [Contributing](#)
- [\[Key requirements concepts\]](#)
- [How to install plugins in develop mode?](#)
- [How to setup and test translations?](#)
- [How to run tests?](#)
- [How to create a plugin? ->](#)

## 1.2.2 How-to guides

This is a collection of guides for specific issues or cover more details than the tutorials.

### Web JSON-RPC

#### How to connect to JSON-RPC with curl

Before continuing make sure deluge-web or webui plugin is running.

#### Create a curl config

To save a lot of typing and to keep the curl command short we shall create a `curl.cfg` files and put the following contents in it:

```
request = "POST"
compressed
cookie = "cookie_deluge.txt"
cookie-jar = "cookie_deluge.txt"
header = "Content-Type: application/json"
header = "Accept: application/json"
url = "http://localhost:8112/json"
write-out = "\n"
```

To pretty-print the JSON result see: <https://stackoverflow.com/q/352098/175584>

#### Login to WebUI

Login to the WebUI and get session cookie:

```
curl -d '{"method": "auth.login", "params": ["deluge"], "id": 1}' -K curl.cfg
```

Result is `true` to signify that login was successful:

```
{
  "error": null,
  "id": 1,
  "result": true
}
```

Check the contents of the cookie file to verify session ID created.

```
cat cookie_deluge.txt
# Netscape HTTP Cookie File
# http://curl.haxx.se/docs/http-cookies.html
# This file was generated by libcurl! Edit at your own risk.

localhost FALSE /json FALSE 1540061203 _session_id <session_id>
```

## Check connected to deluged

Use the `web.connected` method to get a boolean response if the webui is connected to a deluged host:

```
curl -d '{"method": "web.connected", "params": [], "id": 1}' -K curl.cfg
```

Result is `false` because WebUI is not yet connected to the daemon:

```
{
  "error": null,
  "id": 1,
  "result": false
}
```

## Get list of deluged hosts

Use the `web.get_hosts` method:

```
curl -d '{"method": "web.get_hosts", "params": [], "id": 1}' -K curl.cfg
```

The result contains the `<hostID>` for using in request `params` field.

```
{
  "error": null,
  "id": 1,
  "result": [
    [
      "<hostID>",
      "127.0.0.1",
      58846,
      "localclient"
    ]
  ]
}
```

## Get the deluged host status

```
curl -d '{"method": "web.get_host_status", \
"params": ["<hostID>"], "id": 1}' -K curl.cfg
```

The result shows the version and status; *online*, *offline* or *connected*.

```
{
  "error": null,
  "id": 1,
  "result": [
    "<hostID>",
    "Online",
    "2.0.0"
  ]
}
```

## Connect to deluged host

To connect to deluged with <hostID>:

```
curl -d '{"method": "web.connect", \
"params": [<hostID>], "id": 1}' -K curl.cfg
```

The result contains the full list of available host methods:

```
{
  "error": null,
  "id": 1,
  "result": [
    "core.add_torrent_url",
    ...
    "core.upload_plugin"
  ]
}
```

## Disconnect from host

```
curl -d '{"method": "web.disconnect", "params": [], "id": 1}' -K curl.cfg
```

A successful result:

```
{
  "error": null,
  "id": 1,
  "result": "Connection was closed cleanly."
}
```

## Add a torrent

```
curl -d '{"method": "web.add_torrents", "params": \
[[{"path": "/tmp/ubuntu-12.04.1-desktop-amd64.iso.torrent", \
"options": null}], "id": 1}' -K curl.cfg
```

## Add a magnet URI

```
curl-d '{"method": "core.add_torrent_magnet", \
"params": [{"<magnet_uri>", {}}, {"id": 1}]' -K curl.cfg
```

## Get list of files for a torrent

```
curl -d '{"method": "web.get_torrent_files", \
"params": [{"<torrentid>"}, {"id": 1}]' -K curl.cfg
```

## Set a core config option

```
curl -d '{"method": "core.set_config", \
"params": [{"max_upload_slots_global": "200"}], "id": 1}' -K curl.cfg

{"error": null, "result": null, "id": 1}
```

## Useful curl config options

For full list of options see man page `man curl` or `help curl --help`:

```
--cookie (-b) # Load cookie file with session id
--cookie-jar (-c) # Save cookie file with session id
--compressed # responses are gzipped
--include (-i) # Include the HTTP header in output (optional)
--header (-H) # HTTP header
--request (-X) # custom request method
--data (-d) # data to send in POST request '{"method": "", "params": [], "id": ""}'
--insecure (-k) # use with self-signed certs https
```

## Plugins

### How to update a Deluge 1.3 plugin for 2.0

With the new code in Deluge 2.0 there are changes that require authors of existing plugins to update their plugins to work on Deluge 2.0.

The main changes are with Python 3 support and the new GTK3 user interface with the dropping of GTK2. However it is still possible for a 1.3 plugin to be made compatible with 2.0 and this guide aims to help with that process.

Note that the Deluge 2.0 plugins now use namespace packaging which is not compatible with Deluge 1.3.

## Python

### Python version matching

Ensure your code is both Python 2.7 and Python  $\geq 3.5$  compatible.

In 1.3-stable the plugins that were built with a specific version of Python could not be loaded if the system Python also matched.

This has change in Deluge 2.0 and it will load any Python version of plugin eggs so compatibility is essential for end-users not to encounter issues.

### Six

Use `six` to assist with compatibility.

### Unicode literals

Add this to files to ensure strings and bytes separation so there are no surprises when running on Python 3.

### GTK 3 addition

In order to support both Deluge 1.3 and 2.0 all existing plugin GTK UI files must be copied and then converted to contain only GTK3 code with the old files still using PyGTK e.g.:

```
cp gtkui.py gtk3ui.py
```

### Convert from libglade to GtkBuilder

With PyGTK there were two library options for creating the user interface from XML files by default Deluge plugins used libglade but that has been deprecated and removed in GTK3. So the libglade `.glade` files will need converted to GtkBuilder `.ui` files and the Python code updated.

<https://developer.gnome.org/gtk2/stable/gtk-migrating-GtkBuilder.html>

### gtk-builder-convert

Install the `gtk-builder-convert` converter on Ubuntu with:

```
sudo apt install libgtk2.0-dev
```

To convert your GTK run it like so:

```
gtk-builder-convert data/config.glade data/config.ui
```

### Glade UI designer for GTK2

The above conversion can be done in Glade UI designer (version  $\leq 3.8$ ), ensuring that the minimum Gtk version is set to 2.24 and any deprecated widgets are fixed. The updated file should be saved with file extension `.ui`.

## Python code changes

The code needs to replace `gtk.glade` references with `gtk.Builder` and the first step is updating how the files are loaded:

```
- self.glade = gtk.glade.XML(get_resource("config.glade"))
+ self.builder = gtk.Builder()
+ self.builder.add_from_file(get_resource("config.ui"))
```

The next stage is to replace every occurrence of these glade methods with the builder equivalents:

```
glade.signal_autoconnect -> builder.connect_signals
glade.get_widget -> builder.get_object
```

## Migrate XML files to GTK3

If you open and save the file it will update with the new requirement header:

```
<!-- Generated with glade 3.18.3 -->
<interface>
  <requires lib="gtk+" version="3.0"/>
```

You can fix deprecated widgets but keep the minimum GTK version to `<= 3.10` for desktop compatibility.

An example of migrating a Deluge plugin to GtkBuilder: [AutoAdd GtkBuilder](#)

## Gtk import rename

Move from PyGTK to GTK3 using Python bindings.

<https://pygobject.readthedocs.io/en/latest/guide/porting.html>

```
wget https://gitlab.gnome.org/GNOME/pygobject/raw/master/tools/pygi-convert.sh
cp gtkui.py gtk3ui.py
sh pygi-convert.sh gtk3ui.py
```

```
-import gtk
+from gi.repository import Gtk
```

```
- self.builder = gtk.Builder()
+ self.builder = Gtk.Builder()
```

## Deluge GTK3

Imports will need updated from `deluge.ui.gtkui` to `deluge.ui.gtk3`.

## PluginBase

```
-from deluge.plugins.pluginbase import GtkPluginBase
+from deluge.plugins.pluginbase import Gtk3PluginBase
-class GtkUI(GtkPluginBase):
+class Gtk3UI(Gtk3PluginBase):
```

## 1.2.3 Packaging documentation

### Release Checklist

#### Pre-Release

- Update translation po files from Launchpad account.
- Changelog is updated with relevant commits and release date is added.
- Version number increment:
  - setup.py
  - man pages
  - osx/Info.plist
  - Version and month sed commands:
    - \* `git grep -l '2\.0\.0' | grep -v CHANGELOG.md | xargs sed -i 's/2\.0\.0/2\.0\.1/g'`
    - \* `git grep -l 'October' docs/man | xargs sed -i 's/October/November/g'`
- Increment copyright year:
  - osx/Info.plist
- Tag release in git and push upstream.
  - e.g. `git tag -a deluge-2.0.0 -m "Deluge 2.0.0 Release"`

#### Release

- Run `make_release` script on extracted tarball e.g.
  - `make_release deluge-2.0.0`
- Package for OSs, Ubuntu, Windows, OSX.
- Upload source tarballs and packages to ftp. (*Ensure file permissions are global readable: 0644*)

#### Post-Release

- Update with version, hashes and release notes:
  - ReleaseNotes (Create new version page and add link to this page)
  - Forum announcement
  - IRC welcome message

- Website `index.php` and `version` files
- [Wikipedia](#)
- Trac close the milestone and add new version for tickets.
- Ensure all stable branch commits are also applied to development branch.

## Launchpad recipe

The launchpad build recipes are for build from source automatically to provide ubuntu packages. They are used to create daily builds of a git repo branch.

Note these don't have the same control as a creating a publishing to PPA.

Main reference: <https://help.launchpad.net/Packaging/SourceBuilds/Recipes>

## Deluge launchpad build recipes

Recipe configuration: <https://code.launchpad.net/~deluge-team/+recipes>

An example for building the develop branch:

```
# git-build-recipe format 0.4 deb-version 2.0.0.dev{revno}+{git-commit}+{time}
lp:deluge develop
nest-part packaging lp:~calumlind/+git/lp_deluge_deb debian debian develop
```

There are two parts, first to get the source code branch and then the debian files for building the package.

## Testing and building locally

Create a `deluge.recipe` file with the contents from launchpad and create the build files with `git-build-recipe`:

```
git-build-recipe --allow-fallback-to-native deluge.recipe lp_build
```

Setup `pbuilder` and build the deluge package:

```
sudo pbuilder build lp_build/deluge*.dsc
```

Alternatively to build using local files with `pdebuild`:

```
cd lp_build/deluge/deluge
pdebuild
```

This will allow modifying the debian files to test changes to `rules` or `control`.

## 1.3 Reference

Technical reference material.

### 1.3.1 Deluge Web UI

The Deluge web interface is intended to be a full featured interface built using the ExtJS framework, running on top of a Twisted webserver.

#### SSL Configuration

By default the web interface will use the same private key and certificate as the Deluge daemon. If you wish to use a different certificate/key (see [How to Create a SSL Certificate](#)) for information on creating one) you are able to specify which you want to use.

There are 2 ways to enable SSL encryption in the webserver, 1 is to specify it in your configuration (accessible via the Preferences window). The other is to add '-ssl' when running the webserver, which will override the configuration value and enable SSL.

### 1.3.2 Deluge RPC

#### Message Formats

DelugeRPC is a protocol used for daemon/client communication. There are four types of messages involved in the protocol: RPC Request, RPC Response, RPC Error and Event. All messages are zlib compressed rencoded strings and their data formats are detailed below.

#### RPC Request

This message is created and sent by the client to the server requesting that a remote method be called. Multiple requests can be bundled in a list.

**[[request\_id, method, [args], {kwargs}], ...]**

**request\_id (int)** An integer determined by the client that is used in replies from the server. This is used to ensure the client knows which request the data is in response to. Another alternative would be to respond in the same order the requests come in, but this could cause lag if an earlier request takes longer to process.

**method (str)** The name of the remote method to call. This name can be in dotted format to call other objects or plugins methods.

**args (list)** The arguments to call the method with.

**kwargs (dict)** The keyword arguments to call the method with.

#### RPC Response

This message is created and sent in response to a RPC Request from a client. It will hold the return value of the requested method call. In the case of an error, a RPC Error message will be sent instead.

**[message\_type, request\_id, [return\_value]]**

**message\_type (int)** This will be a RPC\_RESPONSE type id. This is used on the client side to determine what kind of message is being received from the daemon.

**request\_id (int)** The request\_id is the same as the one sent by the client in the initial request. It used on the client side to determine what message this is in response to.

**return\_value (list)** The return value of the method call.

## RPC Error

This message is created in response to an error generated while processing a RPC Request and will serve as a replacement for a RPC Response message.

[**message\_type**, **request\_id**, **exception\_type**, **exception\_msg**, **traceback**]

**message\_type** (int) This will be a RPC\_ERROR type id.

**request\_id** (int) The request\_id is the same as the one sent by the client in the initial request.

**exception\_type** (str) The type of exception raised.

**exception\_msg** (str) The message as to why the exception was raised.

**traceback** (str) The traceback of the generated exception.

## Event

This message is created by the daemon and sent to the clients without being in response to a RPC Request. Events are generally sent for changes in the daemon's state that the clients need to be made aware of.

[**message\_type**, **event\_name**, **data**]

**message\_type** (int) This will be a RPC\_EVENT type id.

**event\_name** (str) This is the name of the event being emitted by the daemon.

**data** (list) Additional data to be sent with the event. This is dependent upon the event being emitted.

### 1.3.3 Deluge RPC API

- *Deluge RPC*

```
class deluge.core.core.Core (listen_interface=None,                                outgoing_interface=None,
                               read_only_config_keys=None)
```

```
add_torrent_file (filename, filedump, options)
```

Adds a torrent file to the session.

#### Parameters

- **filename** (*str*) – The filename of the torrent.
- **filedump** (*str*) – A base64 encoded string of the torrent file contents.
- **options** (*dict*) – The options to apply to the torrent upon adding.

**Returns** *str* – The torrent\_id or None.

**RPC exported method** (*Auth level: 5*)

```
add_torrent_file_async (filename, filedump, options, save_state=True)
```

Adds a torrent file to the session asynchronously.

#### Parameters

- **filename** (*str*) – The filename of the torrent.
- **filedump** (*str*) – A base64 encoded string of torrent file contents.
- **options** (*dict*) – The options to apply to the torrent upon adding.

- **save\_state** (*bool*) – If the state should be saved after adding the file.

**Returns** *Deferred* – The torrent ID or None.

**RPC exported method** (*Auth level: 5*)

**add\_torrent\_files** (*torrent\_files*)

Adds multiple torrent files to the session asynchronously.

**Parameters** **torrent\_files** (*list of tuples*) – Torrent files as tuple of (filename, file-dump, options).

**Returns** *Deferred*

**RPC exported method** (*Auth level: 5*)

**add\_torrent\_magnet** (*uri, options*)

Adds a torrent from a magnet link.

**Parameters**

- **uri** (*string*) – the magnet link
- **options** (*dict*) – the options to apply to the torrent on add

**Returns** the *torrent\_id*

**Return type** *string*

**RPC exported method** (*Auth level: 5*)

**add\_torrent\_url** (*url, options, headers=None*)

Adds a torrent from a url. Deluge will attempt to fetch the torrent from url prior to adding it to the session.

**Parameters**

- **url** (*string*) – the url pointing to the torrent file
- **options** (*dict*) – the options to apply to the torrent on add
- **headers** (*dict*) – any optional headers to send

**Returns** a *Deferred* which returns the *torrent\_id* as a *str* or *None*

**RPC exported method** (*Auth level: 5*)

**connect\_peer** (*torrent\_id, ip, port*)

**RPC exported method** (*Auth level: 5*)

**create\_account** (*username, password, authlevel*)

**RPC exported method** (*Auth level: 10*)

**create\_torrent** (*path, tracker, piece\_length, comment, target, webseeds, private, created\_by, trackers, add\_to\_session*)

**RPC exported method** (*Auth level: 5*)

**disable\_plugin** (*plugin*)

**RPC exported method** (*Auth level: 5*)

**enable\_plugin** (*plugin*)

**RPC exported method** (*Auth level: 5*)

**force\_reannounce** (*torrent\_ids*)

**RPC exported method** (*Auth level: 5*)

**force\_recheck** (*torrent\_ids*)  
 Forces a data recheck on *torrent\_ids*  
**RPC exported method** (*Auth level: 5*)

**get\_auth\_levels\_mappings** ()  
**RPC exported method** (*Auth level: 0*)

**get\_available\_plugins** ()  
 Returns a list of plugins available in the core  
**RPC exported method** (*Auth level: 5*)

**get\_completion\_paths** (*args*)  
 Returns the available path completions for the input value.  
**RPC exported method** (*Auth level: 5*)

**get\_config** ()  
 Get all the preferences as a dictionary  
**RPC exported method** (*Auth level: 5*)

**get\_config\_value** (*key*)  
 Get the config value for *key*  
**RPC exported method** (*Auth level: 5*)

**get\_config\_values** (*keys*)  
 Get the config values for the entered keys  
**RPC exported method** (*Auth level: 5*)

**get\_enabled\_plugins** ()  
 Returns a list of enabled plugins in the core  
**RPC exported method** (*Auth level: 5*)

**get\_external\_ip** ()  
 Returns the external ip address recieved from libtorrent.  
**RPC exported method** (*Auth level: 5*)

**get\_filter\_tree** (*show\_zero\_hits=True, hide\_cat=None*)  
 returns {field: [(value,count)] } for use in sidebar(s)  
**RPC exported method** (*Auth level: 5*)

**get\_free\_space** (*path=None*)  
 Returns the number of free bytes at *path*  
**Parameters** *path* (*string*) – the path to check free space at, if None, use the default download location  
**Returns** the number of free bytes at *path*  
**Return type** int  
**Raises** **InvalidPathError** – if the path is invalid  
**RPC exported method** (*Auth level: 5*)

**get\_known\_accounts** ()  
**RPC exported method** (*Auth level: 10*)

**get\_libtorrent\_version** ()  
 Returns the libtorrent version.

**Returns** the version

**Return type** string

**RPC exported method** (*Auth level: 5*)

**get\_listen\_port** ()

Returns the active listen port

**RPC exported method** (*Auth level: 5*)

**get\_path\_size** (*path*)

Returns the size of the file or folder 'path' and -1 if the path is unaccessible (non-existent or insufficient privs)

**RPC exported method** (*Auth level: 5*)

**get\_proxy** ()

Returns the proxy settings

**Returns** *dict* – Contains proxy settings.

## Notes

**Proxy type names:** 0: None, 1: Socks4, 2: Socks5, 3: Socks5 w Auth, 4: HTTP, 5: HTTP w Auth, 6: I2P

**RPC exported method** (*Auth level: 5*)

**get\_session\_state** ()

Returns a list of torrent\_ids in the session.

**RPC exported method** (*Auth level: 5*)

**get\_session\_status** (*keys*)

Gets the session status values for 'keys', these keys are taking from libtorrent's session status.

See: <http://www.rasterbar.com/products/libtorrent/manual.html#status>

**Parameters** *keys* (*list*) – the keys for which we want values

**Returns** a dictionary of {key: value, ... }

**Return type** dict

**RPC exported method** (*Auth level: 5*)

**get\_torrent\_status** (*torrent\_id, keys, diff=False*)

**RPC exported method** (*Auth level: 5*)

**get\_torrents\_status** (*filter\_dict, keys, diff=False*)

returns all torrents , optionally filtered by filter\_dict.

**RPC exported method** (*Auth level: 5*)

**glob** (*path*)

**RPC exported method** (*Auth level: 5*)

**is\_session\_paused** ()

Returns the activity of the session

**RPC exported method** (*Auth level: 5*)

**move\_storage** (*torrent\_ids, dest*)

**RPC exported method** (*Auth level: 5*)

**pause\_session** ()

Pause the entire session

**RPC exported method** (*Auth level: 5*)

**pause\_torrent** (*torrent\_id*)

Pauses a torrent

**RPC exported method** (*Auth level: 5*)

**pause\_torrents** (*torrent\_ids=None*)

Pauses a list of torrents

**RPC exported method** (*Auth level: 5*)

**prefetch\_magnet\_metadata** (*magnet, timeout=30*)

Download the metadata for the magnet uri without adding torrent to deluge session.

#### Parameters

- **magnet** (*str*) – The magnet uri.
- **timeout** (*int*) – Time to wait to receive metadata from peers.

#### Returns

*Deferred* – A tuple of (*torrent\_id* (*str*), *metadata* (*bytes*)) for the magnet.

The metadata is base64 encoded.

**RPC exported method** (*Auth level: 5*)

**queue\_bottom** (*torrent\_ids*)

**RPC exported method** (*Auth level: 5*)

**queue\_down** (*torrent\_ids*)

**RPC exported method** (*Auth level: 5*)

**queue\_top** (*torrent\_ids*)

**RPC exported method** (*Auth level: 5*)

**queue\_up** (*torrent\_ids*)

**RPC exported method** (*Auth level: 5*)

**remove\_account** (*username*)

**RPC exported method** (*Auth level: 10*)

**remove\_torrent** (*torrent\_id, remove\_data*)

Removes a single torrent from the session.

#### Parameters

- **torrent\_id** (*str*) – The torrent ID to remove.
- **remove\_data** (*bool*) – If True, also remove the downloaded data.

**Returns** *bool* – True if removed successfully.

**Raises** *InvalidTorrentError* – If the torrent ID does not exist in the session.

**RPC exported method** (*Auth level: 5*)

**remove\_torrents** (*torrent\_ids, remove\_data*)

Remove multiple torrents from the session.

#### Parameters

- **torrent\_ids** (*list*) – The torrent IDs to remove.

- **remove\_data** (*bool*) – If True, also remove the downloaded data.

**Returns**

*list* –

An empty list if no errors occurred otherwise the list contains tuples of strings, a torrent ID and an error message. For example:

```
[('<torrent_id>', 'Error removing torrent')]
```

**RPC exported method** (*Auth level: 5*)

**rename\_files** (*torrent\_id, filenames*)

Rename files in *torrent\_id*. Since this is an asynchronous operation by libtorrent, watch for the `TorrentFileRenamedEvent` to know when the files have been renamed.

**Parameters**

- **torrent\_id** (*string*) – the *torrent\_id* to rename files
- **filenames** (*((index, filename), ...)*) – a list of index, filename pairs

**Raises** `InvalidTorrentError` – if *torrent\_id* is invalid

**RPC exported method** (*Auth level: 5*)

**rename\_folder** (*torrent\_id, folder, new\_folder*)

Renames the 'folder' to 'new\_folder' in 'torrent\_id'. Watch for the `TorrentFolderRenamedEvent` which is emitted when the folder has been renamed successfully.

**Parameters**

- **torrent\_id** (*string*) – the torrent to rename folder in
- **folder** (*string*) – the folder to rename
- **new\_folder** (*string*) – the new folder name

**Raises** `InvalidTorrentError` – if the *torrent\_id* is invalid

**RPC exported method** (*Auth level: 5*)

**rescan\_plugins** ()

Rescans the plugin folders for new plugins

**RPC exported method** (*Auth level: 5*)

**resume\_session** ()

Resume the entire session

**RPC exported method** (*Auth level: 5*)

**resume\_torrent** (*torrent\_id*)

Resumes a torrent

**RPC exported method** (*Auth level: 5*)

**resume\_torrents** (*torrent\_ids=None*)

Resumes a list of torrents

**RPC exported method** (*Auth level: 5*)

**set\_config** (*config*)

Set the config with values from dictionary

**RPC exported method** (*Auth level: 5*)

**set\_torrent\_auto\_managed** (*\*\*kwargs*)  
 Deprecated: Use `set_torrent_options` with ‘auto\_managed’  
**RPC exported method** (*Auth level: 5*)

**set\_torrent\_file\_priorities** (*\*\*kwargs*)  
 Deprecated: Use `set_torrent_options` with ‘file\_priorities’  
**RPC exported method** (*Auth level: 5*)

**set\_torrent\_max\_connections** (*\*\*kwargs*)  
 Deprecated: Use `set_torrent_options` with ‘max\_connections’  
**RPC exported method** (*Auth level: 5*)

**set\_torrent\_max\_download\_speed** (*\*\*kwargs*)  
 Deprecated: Use `set_torrent_options` with ‘max\_download\_speed’  
**RPC exported method** (*Auth level: 5*)

**set\_torrent\_max\_upload\_slots** (*\*\*kwargs*)  
 Deprecated: Use `set_torrent_options` with ‘max\_upload\_slots’  
**RPC exported method** (*Auth level: 5*)

**set\_torrent\_max\_upload\_speed** (*\*\*kwargs*)  
 Deprecated: Use `set_torrent_options` with ‘max\_upload\_speed’  
**RPC exported method** (*Auth level: 5*)

**set\_torrent\_move\_completed** (*\*\*kwargs*)  
 Deprecated: Use `set_torrent_options` with ‘move\_completed’  
**RPC exported method** (*Auth level: 5*)

**set\_torrent\_move\_completed\_path** (*\*\*kwargs*)  
 Deprecated: Use `set_torrent_options` with ‘move\_completed\_path’  
**RPC exported method** (*Auth level: 5*)

**set\_torrent\_options** (*torrent\_ids, options*)  
 Sets the torrent options for `torrent_ids`

**Parameters**

- **torrent\_ids** (*list*) – A list of `torrent_ids` to set the options for.
- **options** (*dict*) – A dict of torrent options to set. See `torrent.TorrentOptions` class for valid keys.

**RPC exported method** (*Auth level: 5*)

**set\_torrent\_prioritize\_first\_last** (*\*\*kwargs*)  
 Deprecated: Use `set_torrent_options` with ‘prioritize\_first\_last’  
**RPC exported method** (*Auth level: 5*)

**set\_torrent\_remove\_at\_ratio** (*\*\*kwargs*)  
 Deprecated: Use `set_torrent_options` with ‘remove\_at\_ratio’  
**RPC exported method** (*Auth level: 5*)

**set\_torrent\_stop\_at\_ratio** (*\*\*kwargs*)  
 Deprecated: Use `set_torrent_options` with ‘stop\_at\_ratio’  
**RPC exported method** (*Auth level: 5*)

**set\_torrent\_stop\_ratio** (*\*\*kwargs*)  
Deprecated: Use `set_torrent_options` with `'stop_ratio'`

**RPC exported method** (*Auth level: 5*)

**set\_torrent\_trackers** (*torrent\_id, trackers*)  
Sets a torrents tracker list. trackers will be [{"url", "tier"}]

**RPC exported method** (*Auth level: 5*)

**test\_listen\_port** ()  
Checks if the active port is open

**Returns** True if the port is open, False if not

**Return type** bool

**RPC exported method** (*Auth level: 5*)

**update\_account** (*username, password, authlevel*)  
**RPC exported method** (*Auth level: 10*)

**upload\_plugin** (*filename, filedump*)

**This method is used to upload new plugins to the daemon. It is used** when connecting to the daemon remotely and installing a new plugin on the client side. `'plugin_data'` is a `xmlrpc.Binary` object of the file data, ie, `plugin_file.read()`

**RPC exported method** (*Auth level: 5*)

```
class deluge.core.daemon.Daemon (listen_interface=None, outgoing_interface=None,  
interface=None, port=None, standalone=False,  
read_only_config_keys=None)
```

The Deluge Daemon class

```
__init__ (listen_interface=None, outgoing_interface=None, interface=None, port=None, stan-  
dalone=False, read_only_config_keys=None)
```

#### Parameters

- **listen\_interface** (*str, optional*) – The IP address to listen to BitTorrent connections on.
- **outgoing\_interface** (*str, optional*) – The network interface name or IP address to open outgoing BitTorrent connections on.
- **interface** (*str, optional*) – The IP address the daemon will listen for UI connections on.
- **port** (*int, optional*) – The port the daemon will listen for UI connections on.
- **standalone** (*bool, optional*) – If True the client is in Standalone mode otherwise, if False, start the daemon as separate process.
- **read\_only\_config\_keys** (*list of str, optional*) – A list of config keys that will not be altered by `core.set_config()` RPC method.

**authorized\_call** (*rpc*)  
Determines if session `auth_level` is authorized to call RPC.

**Parameters** **rpc** (*str*) – A RPC, e.g. `core.get_torrents_status`

**Returns** *bool* – True if authorized to call RPC, otherwise False.

**RPC exported method** (*Auth level: 1*)

**get\_method\_list** ()  
Returns a list of the exported methods.  
**RPC exported method** (*Auth level: 5*)

**get\_version** ()  
Returns the daemon version  
**RPC exported method** (*Auth level: 5*)

**shutdown** (\*args, \*\*kwargs)  
**RPC exported method** (*Auth level: 5*)

### 1.3.4 Deluge Web JSON-RPC API

- Spec: [JSON-RPC v1](#)
- URL: /json
- [Deluge RPC API](#)

**class** deluge.ui.web.json\_api.**WebApi**

The component that implements all the methods required for managing the web interface. The complete web json interface also exposes all the methods available from the core RPC.

**add\_host** (*host, port, username=u, password=u*)  
Adds a host to the list.

#### Parameters

- **host** (*str*) – The IP or hostname of the deluge daemon.
- **port** (*int*) – The port of the deluge daemon.
- **username** (*str*) – The username to login to the daemon with.
- **password** (*str*) – The password to login to the daemon with.

#### Returns

*tuple* –

**A tuple of (bool, str). If True will contain the host\_id, otherwise** if False will contain the error message.

**add\_torrents** (*torrents*)  
Add torrents by file

**Parameters** **torrents** (*list*) – A list of dictionaries containing the torrent path and torrent options to add with.

```
json_api.web.add_torrents([
    {
        "path": "/tmp/deluge-web/some-torrent-file.torrent",
        "options": {"download_location": "/home/deluge/"}
    }
])
```

**connect** (*host\_id*)  
Connect the web client to a daemon.

**Parameters** **host\_id** (*str*) – The id of the daemon in the host list.

**Returns** *Deferred* – List of methods the daemon supports.

**connected** ()

The current connection state.

**Returns** True if the client is connected

**Return type** boolean

**deregister\_event\_listener** (*event*)

Remove an event listener from the event queue.

**Parameters** **event** (*string*) – The event name

**disconnect** ()

Disconnect the web interface from the connected daemon.

**download\_torrent\_from\_url** (*url*, *cookie=None*)

Download a torrent file from a url to a temporary directory.

**Parameters** **url** (*string*) – the url of the torrent

**Returns** the temporary file name of the torrent file

**Return type** string

**edit\_host** (*host\_id*, *host*, *port*, *username=u*, *password=u*)

Edit host details in the hostlist.

**Parameters**

- **host\_id** (*str*) – The host identifying hash.
- **host** (*str*) – The IP or hostname of the deluge daemon.
- **port** (*int*) – The port of the deluge daemon.
- **username** (*str*) – The username to login to the daemon with.
- **password** (*str*) – The password to login to the daemon with.

**Returns** *bool* – True if succesful, False otherwise.

**get\_config** ()

Get the configuration dictionary for the web interface.

**Return type** dictionary

**Returns** the configuration

**get\_events** ()

Retrieve the pending events for the session.

**get\_host\_status** (*host\_id*)

Returns the current status for the specified host.

**Parameters** **host\_id** (*string*) – the hash id of the host

**get\_hosts** ()

Return the hosts in the hostlist.

**get\_magnet\_info** (*uri*)

Parse a magnet URI for hash and name.

**get\_plugin\_info** (*name*)

Get the details for a plugin.

**get\_plugin\_resources** (*name*)

Get the resource data files for a plugin.

**get\_plugins** ()

All available and enabled plugins within WebUI.

---

**Note:** This does not represent all plugins from deluge.client.core.

---

**Returns** *dict* – A dict containing ‘available\_plugins’ and ‘enabled\_plugins’ lists.

**get\_torrent\_files** (*torrent\_id*)

Gets the files for a torrent in tree format

**Parameters** **torrent\_id** (*string*) – the id of the torrent to retrieve.

**Returns** The torrents files in a tree

**Return type** dictionary

**get\_torrent\_info** (*filename*)

Return information about a torrent on the filesystem.

**Parameters** **filename** (*string*) – the path to the torrent

**Returns** information about the torrent:

```
{
  "name": the torrent name,
  "files_tree": the files the torrent contains,
  "info_hash" the torrents info_hash
}
```

**Return type** dictionary

**get\_torrent\_status** (*torrent\_id*, *keys*)

Get the status for a torrent, filtered by status keys.

**register\_event\_listener** (*event*)

Add a listener to the event queue.

**Parameters** **event** (*string*) – The event name

**remove\_host** (*host\_id*)

Removes a host from the hostlist.

**Parameters** **host\_id** (*str*) – The host identifying hash.

**Returns** *bool* – True if succesful, False otherwise.

**set\_config** (*config*)

Sets the configuration dictionary for the web interface.

**Parameters** **config** (*dictionary*) – The configuration options to update

**start\_daemon** (*port*)

Starts a local daemon.

**stop\_daemon** (*host\_id*)

Stops a running daemon.

**Parameters** **host\_id** (*string*) – the hash id of the host

**update\_ui** (*keys*, *filter\_dict*)

Gather the information required for updating the web interface.

**Parameters**

- **keys** (*list*) – the information about the torrents to gather
- **filter\_dict** (*dictionary*) – the filters to apply when selecting torrents.

**Returns** The torrent and ui information.

**Return type** dictionary

**upload\_plugin** (*filename, path*)

Upload a plugin to config.

**class** deluge.ui.web.json\_api.**WebUtils**

Utility functions for the webui that do not fit in the WebApi.

**get\_languages** ()

Get the available translated languages

**Returns** *list* – of tuples [(lang-id, language-name), ...]

- genindex
- modindex